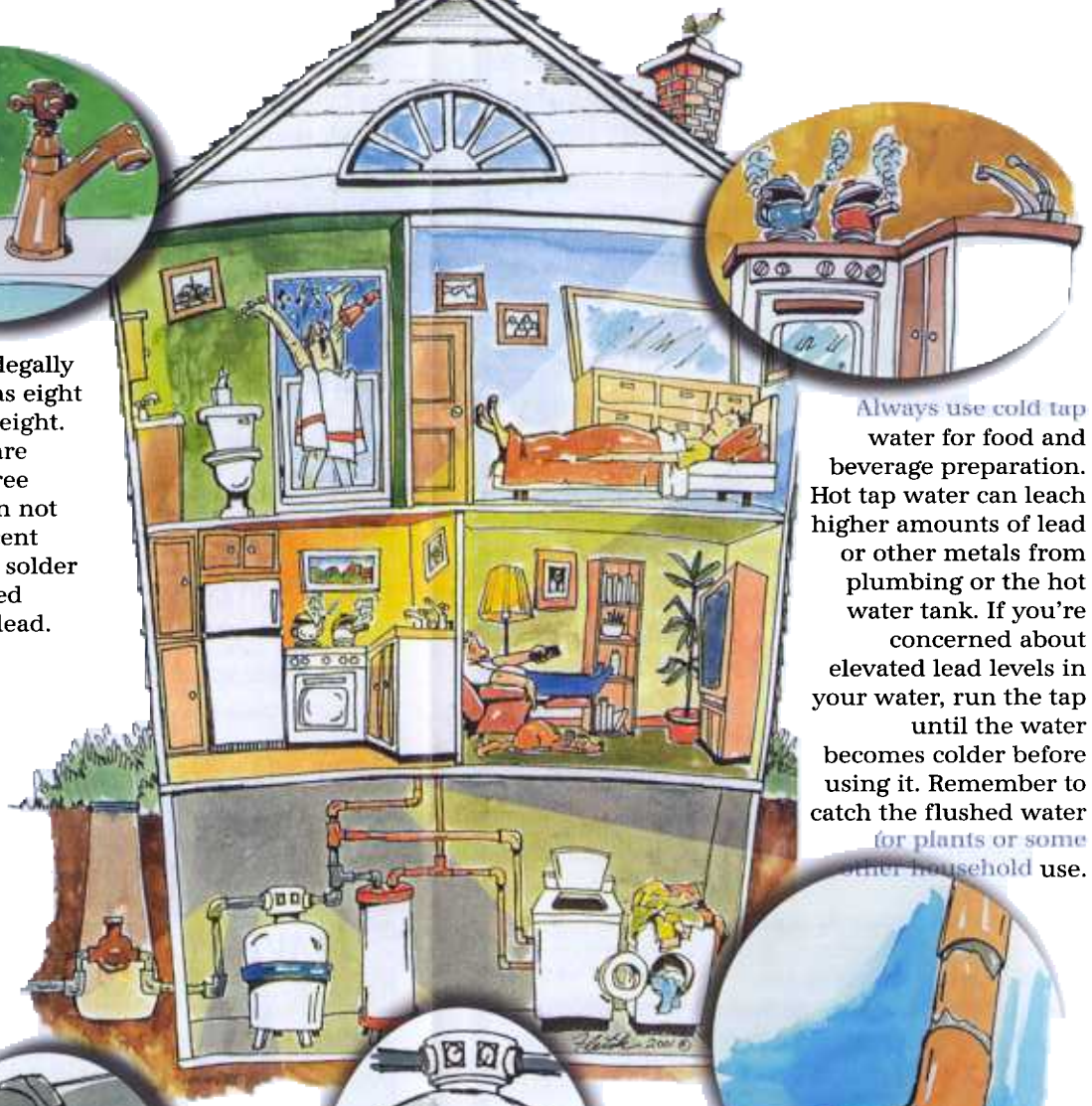
Where water meets lead

Brass faucets can legally contain as much as eight percent lead by weight. Solders and flux are considered lead free when they contain not more than .2 percent lead. Before 1987, solder normally contained about 50 percent lead.



Always use cold tap water for food and beverage preparation. Hot tap water can leach higher amounts of lead or other metals from plumbing or the hot water tank. If you're concerned about elevated lead levels in your water, run the tap until the water becomes colder before using it. Remember to catch the flushed water for plants or some other household use.

Lead is not found in Denver Water's raw water supplies or in treated water when it leaves our plants. The most common source of lead is in a home's or business's plumbing. The connectors and service lines from water mains are sometimes made of lead but become coated with minerals that insulate against the lead.

Soft water can be more corrosive and dissolve higher levels of lead if it is present in plumbing. Some home treatment devices, such as water softeners, can also make water more corrosive.

What Everyone Should Know...

...About Lead in Tap Water

DENVER WATER

Q's & A's about getting the lead out

Q: How does lead get into drinking water?

A: Lead isn't in water that leaves our treatment plants. However, it might occur in your home's plumbing. Lead levels in your drinking water are likely to be higher if:

- Your home has faucets or fittings made of brass that contain some lead;
- Your home or water system has lead pipes;
- Your home has copper pipes and the house was built from 1982-87.

If your interior plumbing fits one of these categories, you have an increased risk if you have a water softener or water often sits in pipes for several hours.

Q: What are lead's health effects?

A: Lead is a toxic metal that is harmful to human health if inhaled or swallowed. It is a health concern in drinking water at levels above 15 parts in a billion. (One part per billion is equivalent to a single drop of water in 55,000 gallons.) Although it must build up in the body before it affects one's health, elevated levels attack the brain, kidneys, nervous system and red blood cells. The degree of harm depends upon the level of exposure from all sources, including soil, wind and water. Effects range from subtle physical changes at low levels to severe neurological and toxic effects or even death at extremely high levels.

Q: Does lead affect everyone equally?

A: Children six and under, infants and fetuses are particularly vulnerable to lead poisoning. A dose of lead that would have little effect on an adult can have a big effect on a small body. A child's mental and physical development can be irreversibly stunted by overexposure to lead. You can guard against lead in baby formula by using only fresh water from the cold-water tap.

Q: What are other sources of lead?

A: Tap water containing lead is estimated to account for only 10 to 20 percent of young children's total exposure to lead. Some more common ways to ingest or inhale lead: It might be present in processed foods, paint (usually the number one cause), auto exhausts, cigarette smoke, blowing dust (especially along highways), household keys, pottery and ceramics.

Q: Does water softness make a difference?

A: Soft water (water that makes soap suds easily) can be more corrosive and therefore might dissolve higher levels of lead. Some home treatment devices, such as water softeners, can also make water more corrosive.

Because of the mineral content of Denver's water, a coating commonly builds up inside pipes and plumbing fixtures over a period of years, protecting any material containing lead from corrosion. That's why likelihood of lead in tap water diminishes greatly as a house grows older and why many older homes with lead plumbing don't have high lead levels.

Q: How do I tell the difference between lead and iron plumbing?

A: Lead is a softer metal than iron and scratches easily. Try scratching the pipe with a key or screwdriver. Lead pipe will be dull gray in color, but the scratch marks will appear bright silver.

Solders and flux are considered lead free when they contain not more than .2 percent lead. In the past, solder normally contained about 50 percent lead. Pipes and fittings are considered lead free when they contain not more than eight percent lead.

GET THE LEAD OUT

Here are some ways to reduce your exposure to lead if you think it's present in your tap water:

- When water has been standing in your pipes, run the cold-water tap until it gets noticeably colder. The lower temperature indicates you have cleared water that has been standing in pipes. (To conserve water, remember to catch the flushed tap water for plants or some other household use.)
- Use only water from the cold-water tap for drinking, cooking and, especially, for making baby formula. Hot tap water dissolves lead faster and is likely to contain higher levels of lead if present.
- Insist on lead-free solder and lead-free fixtures when repairing or replacing plumbing.

HAVE YOUR WATER TESTED

The only way to be sure of the amount of lead in your household water is to have it tested by a competent laboratory. You should be particularly suspicious if your home has lead pipes and you see signs of corrosion (frequent leaks, rust-colored water, stained dishes or laundry).

If you decide to have your water tested for lead, make sure you select a lab that is state certified for that analysis through the Colorado Department of Public Health and Environment at 303-692-3500.

Information about testing young children for lead can also be obtained from the Colorado Department of Public Health and Environment at 303-692-2700.

¡Saque el plomo del agua!

Usted no lo puede ver, oler o probar, pero seguro ha oído de los peligros del plomo y la posibilidad de que entre en su agua potable. Mucho plomo en el cuerpo humano puede cuasar daños serios al cerebro, a los riñones, al sistema nervioso y a los glóbulos rojos. Los niños son los que corren mas riesgo, aunque estén expuestos poco tiempo. El mayor riesgo ocurre en niños de seis años y menores, y al bebé durante el embarazo. Aquí le damos información sobre el plomo para ayudarle a determinar si usted tiene un problema de este tipo y, si es así, cómo resolverlo.

PREGUNTAS y RESPUESTAS

Pregunta: ¿Cómo se entra el plomo en el agua potable?

Respuesta: El plomo no se encuentra en las cañerías principales de la ciudad. La fuente más común de plomo en el agua potable son las cañerías en una casa. Los niveles del plomo en su agua potable probable serán altos si:

- Su casa tiene llaves o instalaciones de latón que contienen plomo;
- Su casa o sistema de cañerías tiene tubería de plomo;
- Su casa tiene tubería de cobre y se construyó entre 1982 y 1987;
- Tiene un aparato ablandador de agua y su casa cumple una de las condiciones mencionadas arriba;
- El agua se queda en la tubería de plomo por varias horas sin que se use, es muy probable que el plomo se disuelva en el agua.

Pregunta: ¿Cuáles son los efectos del plomo en la salud?

Respuesta: El plomo es un metal tóxico que hace daño a la salud humana si se respira o se toma. El daño depende del nivel al que uno está expuesto de todos los medios, incluyendo la tierra, el viento y el agua. Los efectos pueden ser desde cambios físicos leves en niveles bajos, a efectos neurológicos y tóxicos severos o inclusive la muerte en niveles muy altos.

Pregunta: ¿Cuáles son otras fuentes del plomo?

Respuesta: El agua de la llave que contiene plomo se estima que es sólo el 10 al 20 por ciento de la exposición total en los niños pequeños. Entre algunas de las maneras más comunes para tomar o respirar el plomo se ecuentran las siguientes: Puede estar presente en comidas procesadas, pintura (generalmente la causa principal), gases del escape de los autos, humo proveniente del cigarro, polvo en el aire (especialmente en las carreteras), artículos de barro y cerámica.

Pregunta: ¿Cómo puedo distinguir entre una tubería de plomo o de fierro?

Respuesta: El plomo es un metal más blando que el fierro y se raspa fácilmente. Trate de raspar el tubo con una llave o un desarmador. La tubería de plomo será de color gris pálido, pero las marcas de lo raspado aparecerán plateado brillante.

ELIMINE EL PLOMO

Hay algunas maneras de reducir su exposición al plomo en caso de que crea que está presente en el agua de la llave:

- Cuando el agua ha estado estancada en su tubería, abra el chorro de agua fría de la llave hasta que se ponga más fría.
- Use sólo agua fría de la llave para tomar, cocinar y, especialmente, para preparar la leche en polvo del bebé. El agua caliente disuelve más rápido el plomo y también por lo general es el tipo de agua que tiene más plomo si es que está presente.
- Insista en soldadura e instalaciones libres de plomo cuando le hagan reparaciones o cambie las cañerías.

HAGA PRUEBAS A SU AGUA

Si decide que le hagan la prueba del plomo a su agua, asegúrese de escoger un laboratorio que esté certificado para ese análisis por medio del Departamento de Salud Pública y Medio Ambiente de Colorado al teléfono 303-692-3500. Para información sobre pruebas del plomo para niños pequeños, llame al 303-692-2700.

APARATOS PARA TRATAMIENTO DEL AGUA

Hay muchos aparatos de filtración certificados para reducir el plomo, pero los que no están diseñados para quitar el plomo no servirán, al menos que hayan sido certificados para quitar el plomo por la Fundación Internacional de Sanidad Nacional (877-867-3435) o la Asociación de la Calidad del Agua (630-505-0161, ext. 270), su efectividad puede variar mucho. Dejar correr el agua de la llave, como le hemos recomendado en este folleto, es tan efectivo como el aparato de filtración.

CUENTE CON NOSOTROS

Como cliente de Denver Water, es importante que usted sepa que el plomo no se encuentra en los ríos que vienen de las montañas ni en las reservas que abastecen nuestra agua. Tampoco se encuentra en el agua que sale de nuestras plantas de tratamiento o en las 2,500 millas de conductos y cañerías principales que conforman el sistema de distribución de Denver Water.

La calidad del agua es nuestra mayor prioridad y continuaremos monitoreando el agua de Denver todo el tiempo. Si quiere saber más sobre la calidad del agua, llame a Denver Water al 303-628-5986.

TREATMENT DEVICES

There are many filtering devices certified for effective lead reduction, but devices that are not designed to remove lead won't work. These implements use various kinds of filtering media, including carbon, ion exchange, resins, activated alumina and other products. Unless they have been certified to remove lead by the National Sanitation Foundation International (877-867-3435) or the Water Quality Association (630-505-0161, ext. 270), their effectiveness can vary greatly. Flushing your tap water as we've recommended in this brochure is extremely effective in removing lead.

COUNT ON US

As a Denver Water customer, it's important for you to know that lead isn't present in the mountain streams and reservoirs that supply our water.

Additionally, it isn't found when water leaves our treatment plants or in the 2,500 miles of conduits and mains that form Denver Water's distribution system. The most common cause is the corrosion that results when tap water reacts with lead pipes, fixtures or lead-based solder in a home's plumbing. Denver Water's treatment process includes corrosion control, and our delivery system contains very few lead service lines. The surfaces of those pipes long ago were coated against leaching by minerals found in Denver's water.

Water quality is our highest priority, and we'll continue to monitor Denver's water every step of the way. If you want to know more about water quality, call Denver Water at 303-628-5996.

DENVER WATER

Denver Water's goal is to provide clean, safe drinking water in abundant quantities to its customers. This brochure is one of many publications – ranging from water conservation to water quality – that the water department issues discussing the efforts Denver Water makes to meet its goal. If you would like to obtain other publications or more copies of this brochure, call 628-6058.

En Español llame a 303-628-5986.

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Lead at the tap: More than a matter of taste

You can't see it, smell it, or taste it, but likely you've heard about the dangers of lead and the possibility of it getting into your drinking water. Too much lead in the human body can cause serious damage to the brain, kidneys, nervous system and red blood cells. Children are particularly vulnerable, even from short-term exposure. The greatest risk occurs in children six and under and to a fetus during pregnancy.

While lead isn't found in Denver Water's raw water supplies or in treated water that leaves our plants, some older homes or ones built between 1982 and 1987 might have high lead levels in their drinking water. Here is some information about lead to help you determine if you have a problem and, if so, what to do about it.

THE MOST COMMON SOURCE of lead in drinking water is a home's plumbing, so it's possible that lead might exist because of age, condition and type of pipes and plumbing fixtures. When water stands in lead pipes or copper pipes joined by lead-based solder for at least several hours without use, there is a potential for lead to dissolve into the water.

It was common practice in the United States through the early 1900s to use lead pipe for inside plumbing. Since the 1930s, galvanized iron and, later, copper replaced lead pipe. However, until 1987, lead-based solder and fixtures containing lead were used in home plumbing. Federal law now requires the use of lead-free solder and lead-free materials in new household plumbing and repair work. These restrictions do not eliminate lead contamination from older buildings or in homes built in the 1980s.

BECAUSE SOME LEAD is still permitted in plumbing fixtures, new brass faucets and fittings can leach lead. Lead levels decrease as a building ages because, as time passes, mineral deposits form a coating on the inside of pipes and fixtures that insulates the water from solder and fixtures.

Homes at risk

- **Older homes built with lead plumbing.**
- **Homes built between 1982-87 using copper pipe with lead solder.**

Health effects

- **Stunted brain development, impaired production of red blood cells, damaged kidneys and nervous system.**

Who's most vulnerable?

- **Children under age six and fetuses.**

Although lead has never been detected at our treatment plants or in the distribution system, state and federal regulations require Denver Water to test a representative number of "high risk" homes for lead. High risk is defined as an older home with lead service lines or plumbing, or a home built between 1982 and 1987 with copper pipe joined with lead-based solder. The regulations require that 90 percent of the samples taken at the tap in 100 high-risk homes be below 15 parts per billion.

DENVER WATER HAS TESTED the required number of homes since 1992, and at least 90 percent of the homes sampled consistently were below the regulated level or showed no detectable levels of lead. Denver Water qualified for reduced testing in 1999 because of our extensive corrosion control program throughout Denver Water's system and the earlier results of the broader testing program.